MONITORING PLAN – Attachment 3 – Sample Preparation and Collection Summary
SWAMP RECREATIONAL USE STUDY
LABOR DAY WEEKEND 2008
CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD
(16 July 2008)

FIELD RUN PREPARATION

For consistency and to ensure non-biased laboratory analyses, samples are labeled in accordance with the San Joaquin River Watershed Unit Procedures Manual.

Worksheets

- Field sheet
- Processing worksheet

Bottles:

Table 1 Bottle Sizes Based on Type of Sample

Bottle Size	Type of Sample	Frequency
120 ml	Normal Samples	Each
	Field Blank	1 Per Run
	Lab Blank	1 Per Run
	Field Duplicate	1 Set (2-120 mL bottles) Per 10 samples
290 ml	Lab Duplicate	1 Set Per 10 samples (1-290 mL bottle to be taken on the field run + 2-120 mL bottles to be left in the lab during the field run into which the 290 mL sample will be split)

Labeling:

- BAC is used in the following examples as the constituent analyzed. Traditionally, BAC has indicated *E. coli* and total coliform. Additional bacteria analysis codes include:
  - O157 – *E. coli* O157:H7
  - CRY – *Cryptosporidium*
  - GIA - *Giardia*
- The sample id codes must follow a standard format of INTYYMMDD-#Constituent ID, where
  - INT – the sampler collector's initials
  - YY – Year the samples were collected
  - MM – Month the samples were collected
  - DD – Day the samples were collected
- Side of the bottle – INTYYMMDD-#BAC with a waterproof marker.

- Top of the cap - #BAC with a waterproof marker
- Mark lab duplicate bottles with the normal and duplicate sample ID numbers.

Place the bottles **standing up** in the ice chest(s).
Ensure bottles are arranged so they will not tip over and that water from melted ice cannot seep in under the cap. Do not allow bottles to float in water.

Include extra empty bottles for potential problems that may arise and to keep the sample bottles from tipping while in transit.

Bacteria Collection*:*

Photos should be taken at each site to visually document conditions

Bacteria samples require aseptic technique be used. Sample bottles are certified as factory sealed and sterilized. Keep sample bottles capped as much as possible. Dispose of bottles that are touched on the inside by anything other than the sample.

Two people are preferred for this procedure; one to collect the sample (Sampler 1) and one to hold the cap (Sample 2). This procedure is used to minimize potential for contaminants to fall in the cap or bottle, and in lieu of uncapping the bottle under the water surface.

1. Secure the bacteria bottle on the clamp

2. Remove the shrink band from bottle.

3. Sampler 1 will then condition the bottle and pole by triple rinsing with the water to be collected prior to sample collection.

4. Sampler 2 will remove the cap from the bottle.

5. Sampler 1 will then collect the sample.
    a. Keep bottle right side up.
    b. Tilt the bottle so that the opening is facing upstream.
    c. Push the bottle forward, horizontally, under the water body surface.
    d. Fill the bottle as close to the 100 ml mark (or 250ml if duplicate) as possible, without going under the line.
    e. Remove excess sample water from the bottle by tilting slowly to dump any extra sample water and then re-check.

6. Sampler 2 then caps the bacteria bottle, and unclamps sample.